

REMARKS

The above noted amended claims are respectfully submitted in place of original claims 1-8. Claims 18-24 are clearly supported throughout the specification, and these claims are presented in order to more fully and clearly claim the subject matter which Applicants consider to constitute their inventive contribution. No new matter is included in these amendments, and their entry is therefore respectfully solicited.

Claims 4-8 have been objected to as being in an improper dependent form. However, in view of the cancellation of these claims, and the nature of new claims 18-24, it is apparent that this rejection has been clearly obviated.

Claims 4-8 have been rejected as being unpatentable under 35 U.S.C. § 112, second paragraph. These claims are said to be indefinite for a number of reasons. However, once again in view of the cancellation of these claims and the substitution of new claims 18-24 herein it is believed that each of these objections has now been clearly obviated.

Claims 1-3 have been rejected as being unpatentable over Justice under 35 U.S.C. § 103(a). The Examiner contends that Justice discloses a method for grinding the surface of a paper making roll for desired contour and level and that the paper roll is carrying a web in a paper machine operation. The Examiner thus concludes that it would be obvious that the paper machine include a twin-wire press section and the grinding of the rolls occur in the twin-wire press section. This rejection is respectfully traversed in view of the above amendments and arguments and for the reasons set forth hereinafter.

Turning to the Justice reference itself, this patent is specifically directed to the use of certain specified equipment in

connection with certain specific paper making machines, in particular, a Yankee dryer drum. In the context of this device, the patentee realizes that these dryer drums are operated with steam-heated surfaces, and that the temperature profile along the drum is not always consistent. This, in turn, leads to a nonuniform shape of the drum during operation. This patentee thus provides a backing roll 15 with a hard surface, carrying abrasive grinding paper 16. This device, as is shown in Fig. 1, can be placed on the portion of the roll where the paper web does not contact the roll, i.e., between rolls 10 and 12. It is thus possible to contact the dryer drum during use in order to smooth the surface to its original condition. Apparently, the presence of nonuniform surface on the drum could lead to a nonuniform paper being produced thereby. It is thus first noted, as the Examiner has obviously realized, that Justice is not directed to the surface of a roll in a twin wire press as set forth in the present claims. The Examiner contends, however, that it would be obvious that the paper machine includes a twin wire press section and the grinding of the rolls can occur in that section. Applicants respectfully demur, however.

Firstly, both the problem and the solutions in these individual environments are different. As is described in the present application, a twin wire press includes a number of rolls on which the wire for supporting the pulp for dewatering is applied. In this case, the rolls are provided with a polymer or rubber coating which wears out in an entirely different manner. Wear on the coating thus occurs along the portion of the roll where the running wires on the rolls are in contact with the fiber web or suspension. Since the width of these wires is slightly shorter than the rolls themselves, the side edges of the wires are within

the short sides of the rolls. This, in turn, leads to the fact that these coatings on the roll surfaces do not wear in the area between the end of the fiber web suspension out to the short sides of the rolls. If this is not dealt with, eventually these coatings will finally come in contact with each other, terminating use of the rolls.

Conventional means for dealing with this have always required either removing the roll itself and using specific grinding machines on which the rolls can be placed, or at the very least, removing the wire from the roll and operating thereon. In either event, is it impossible to deal with this problem while still operating the equipment, thus leading to significant problems in many respects, and of course shutting down of this equipment.

According to the present invention, however, it is not only possible to effect milling of these areas of the roll, but it is now possible to do so while the system continues to operate. It is apparent why the apparatus in Justice, for example, while applied to paper making machines such as a Yankee dryer drum, were never actually considered for use in connection with a twin wire press.

This then brings us to the problem that the apparatus shown in Justice could not actually be used in connection with twin wire presses. Justice is dealing with the surface of a hard surface roll as opposed to the coated surfaces in the twin wire presses discussed above. Thus, the grinding means used by Justice includes the backing roll with abrasive grinding paper thereon. It would be readily understood by those of ordinary skill in this art that the use of abrasive grinding paper on the coated rolls of the present invention would be highly unsatisfactory. Thus, the present claims are all directed to the use of milling equipment for

such purposes. This, of course, is nowhere discussed in or suggested by Justice, since indeed the equipment and apparatus shown in the present application could not be used in connection with the environment required by Justice.

Yet another reason why this is the case is the fact that a twin wire press generally operates at speeds of between 20 and 30 meters per minute, while a conventional paper making machine can reach operating speeds of up to 2,000 meters per minute. Thus, the operating speed of these paper making machines is about 100 times greater than that of a twin wire press. It is thus once again clear that one of ordinary skill in this art would readily appreciate that the use of the milling apparatus of the present invention would not at all be feasible at speeds of the magnitude of those in paper making machines.

It is therefore respectfully submitted that the present claims clearly define patentable subject matter over the prior art, including Justice. Since these claims are deemed to possess the requisite novelty, utility, and unobviousness to warrant their immediate allowance, such action is therefore respectfully solicited.

If, however, for any reason the examiner still does not believe such action can be taken, it is respectfully requested that the Examiner telephone applicant's attorney at (908) 654-5000 in order to overcome any further objections thereto.

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Finally, if there are any additional charges in connection with this amendment, the Examiner is authorized to charge applicant's Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

By 

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